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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,920	11/19/2003	Kurt W. Kramarz	937-1533	6420
23117 7590 04/20/2007 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER KEYS, ROSALYND ANN	
			ART UNIT	PAPER NUMBER
			1621	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/20/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/716,920

Applicant(s)

KRAMARZ ET AL.

Examiner

Rosalynd Keys

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 12-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 14-18, 20-22 and 24-28 is/are rejected.
- 7) ☒ Claim(s) 2-9, 12, 13, 19 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Status of Claims***

1. Claims 1-10 and 12-28 are pending.  
Claims 1, 10, 14-18, 20-22, and 24-28 are rejected.  
Claims 2-9, 12, 13, 19 and 23 are objected.  
Claim 11 is cancelled.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 10, 14-18, 20-22, and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker et al. (US 4,426,542) in view of PTC Organics (<http://www.phasetransfer.com/suppliers/tbac.htm>) and further in view of Judge et al. (UK 1 547 856).

Barker et al. teach the claimed invention in example 14 using tetrabutylammonium chloride (TBAC) as the phase transfer catalyst, but fail to teach removing the phase transfer catalyst by water washing and then recycling the PTC.

PTC Organics (<http://www.phasetransfer.com/suppliers/tbac.htm>) teach that tetrabutylammonium chloride (TBAC) can be separated from a product by water washing (see attachment).

One having ordinary skill in the art at the time of the invention was made would have found it obvious to remove the PTC from the reaction product of Barker et al., by water washing the PTC, since PTC Organics teaches that water washing is an effective means for removing TBAC from a product. The skilled artisan would have been motivated to remove the PTC catalyst since Barker teaches that their alcohols are useful in preparing detergents. The skilled artisan would have been motivated to recycle the PTC catalyst for reuse.

Barker et al. fail to teach using sodium hydroxide in a 10-50% weight solution.

Judge et al. teach an aldol concentration reaction wherein the alkali metal hydroxide solution is 4-50%, more preferably 5-15%, by weight (see page 3, lines 35-43).

One having ordinary skill in the art at the time the invention was made would have found it obvious to utilize an aqueous alkali metal solution, in the range taught by Judge et al., in the process of Barker et al., since Judge et al. has shown that this range is effective for use in aldol condensation reactions.

***Allowable Subject Matter***

6. Claims 2-9, 12, 13, 19 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Amendment***

*Specification*

7. The objection to the specification is withdrawn.

*Claim Rejections - 35 USC § 102*

8. The rejection of claims 1, 10, 14-17, 20-22, and 24-27 under 35 U.S.C. 102(b) as being anticipated by Barker et al. (US 4,426,542) is withdrawn, since the claims now require removal of the phase-transfer catalyst by water washing.

***Response to Arguments***

*Claim Rejections - 35 USC § 102*

9. Applicant's arguments, see paragraph 3 of Applicants remarks, filed January 17, 2007, with respect to the rejection of claims 1-11, 15-22 and 24-27 under 35 U.S.C. 102(b) as being anticipated by Judge et al. (UK 1 547 856) have been fully considered and are persuasive. The rejection of claims 1-10, 15-22 and 24-27 has been withdrawn. Claim 11 has been cancelled.

*Claim Rejections - 35 USC § 103*

Applicant's arguments, see paragraph 4 of Applicants remarks, filed January 17, 2007, with respect to the rejection of claims 1-27 under 35 U.S.C. 103(a) as being unpatentable over Judge et al. (UK 1 547 856) in view of Starks et al. (Phase Transfer Catalysis, 1994, pp. 482-488) and Halpern et al. (Spec. Publ.-R. Soc. Chem, 1999, pp. 30-39) have been fully considered and are

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persuasive. The rejection of claims 1-10 and 12-27 has been withdrawn. Claim 11 has been cancelled.

### **Conclusion**

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

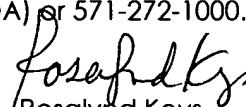
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M, W & F 5:30-7:30 am & 1-5 pm; T & Th 5:30 am-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Rosalyn Keys  
Primary Examiner  
Art Unit 1621

April 15, 2007